

in the form of a narrow fissure nearly to the base of the interparietal process, but is not very obvious, except between the eyes, where it opens into a sort of elongated ellipse. There are eight or nine pores on the top of the head, rather behind the eyes, so arranged as to form nearly a complete circle. There is also a very conspicuous row of three or four large oval pores on the cheek, at the anterior part of the opercle, descending obliquely forwards: other smaller ones may be seen scattered about different parts of the head. The jaws are equal: the teeth as in the last species, excepting that a roughness can be distinctly felt upon the vomer beneath the skin, though there are no teeth on that part which appear through it. The maxillary pair of barbules reach to a point midway between the insertion of the ventrals and the commencement of the anal: of the submandibular pairs, the exterior do not reach beyond the insertion of the pectorals; the interior are two-thirds the length of these. Eyes elliptical, the longitudinal diameter about one-fifth the length of the head; situate nearer the end of the snout than the posterior part of the opercle; the interval between them nearly two diameters. The lateral line slopes downward till opposite the fourth soft ray of the dorsal, then passes off straight along the middle to the caudal.

The pectorals are contained about five-and-a-half times in the entire length. The spine is similar to that of the last species; but the humeral bone is shorter, and scarcely one-third of the pectoral itself. The dorsal is similar; and the space between it and the adipose is the same; but the adipose itself, though of the same form, is not so long, from the body being less elongated; it is not more than half as long again as the dorsal. Anal similar, but the adipose not advancing so much beyond it. Caudal and ventrals similar; but the former with the lobes equal.

COLOUR.—(*In spirits.*) On the whole similar to, but darker than that of the last species. There is some appearance of a fascia along the lateral line. The upper part of the dorsal, and also of the anal, is dusky, but there is no spot on the adipose. Pectorals and ventrals dusky.

A second specimen differs from the above in no respect, except in being smaller, measuring two inches and a quarter in length, and in having one ray more in the anal.

Habitat, Rio de Janeiro?

The number annexed to this species has been lost, but there is reason for believing that Mr. Darwin took it with the last at Rio de Janeiro. I cannot identify it with any of those described by Cuvier and Valenciennes in the "Histoire des Poissons."—It affords another instance of the indefiniteness of the character derived from the presence or absence of vomerine teeth; since a band of such teeth, which are considered by Valenciennes as absent in this genus, can be distinctly felt and made obvious by removing the skin of the palate, though they do not appear externally. This is not the case with the species last described, to which nevertheless, the present one approaches so closely in general character, that they never could be widely separated. Except for the greater elongation of the body in the *P. gracilis*, I should have been almost inclined to consider them as sexes of the same species.

CALlichthys PALEATUS. Jen.

C. capite compresso lævi: ore parvo, cirris maxillaribus ad utrumque angulum duobus, haud ultrà oculos pertingentibus; labro inferiore reflexo, et in duos cirros breves membranaceos producto: spinâ pectorali compressâ, forti, margine interno leviter dentuto, externo lævi, quintam partem totius longitudinis æquanti: caudali bifurcâ, lobis æqualibus acuminatis.

D. 17—1; A. 6; C. 14, &c.; P. 17; V. 6.

LONG. unc. 1. lin. 10.

FORM.—General form resembling that of the *C. punctatus*. Depth, at the commencement of the dorsal, one-third of the length, excluding caudal: thickness at the pectorals three-fourths of the depth. Head slightly compressed, its height very little less than its length, this last, measured to the gills, being rather less than one-fourth of the entire length. Profile falling from the dorsal in one regular slope, and nearly rectilinear till it arrives before the eyes, where it curves downwards, making the extremity of the snout obtuse. Mouth small, the upper jaw a little projecting; two maxillary cirri at each angle; these nearly equal; the lower one a little the longest, reaching to beneath the middle of the eye: also two short cirri, only half the length of the maxillary ones, pendent from the reflexed lower lip, a little separate from each other, one on each side the middle. Teeth so minute as hardly to be distinguished; a row can just be felt on each jaw, and on the vomer. Head smooth. The number of dorsal laminae twenty-one; that of the ventral twenty.

Pectorals a little exceeding the length of the head; the spine nearly as long as the fin itself, but not exceeding one-fifth of the entire length; very strong, compressed, and sharp-pointed, with a few fine teeth or serratures on the inner margin, but smooth on the outer. Height of the dorsal more than half the depth, and a little more than its own length, this last equalling the space between it and the adipose: the spine strong, and similar to that of the pectoral. Anal directly underneath the adipose, and hardly occupying more space. Ventrals shorter than the pectorals, attached beneath the last third of those fins, or under the second soft ray in the dorsal, and scarcely reaching more than half-way to the anal: the first ray, as well as that of the anal, somewhat hispid. Caudal forked for half its length, which about equals that of the head: the lobes equal and pointed.

COLOUR.—(*In spirits.*) General colour yellowish-brown, with dusky spots and mottlings: breast and edge of the abdomen whitish. Pectorals, ventrals, and anal, almost wholly dusky: dorsal and caudal spotted.

This species, in its general character, approaches so extremely near the *C. punctatus* of Valenciennes, that perhaps I am in error in considering it distinct. But it is remarkable for possessing, in addition to the four usual maxillary cirri, two labial, which are neither represented in D'Orbigny's figure,* nor noticed in the description given in the "Histoire des Poissons," and which therefore I infer are not present in that species, as they could hardly have been overlooked, or been deemed unimportant to be noticed. The maxillary cirri also, which in the *C. punctatus*,

* *Voy. dans L'Amér. Mérid. Atl. Ichth. pl. 5. fig. 1.*